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EXAMINER

PATEL, RONAK C

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/539,784	<b>Applicant(s)</b> YUN ET AL.	
	<b>Examiner</b> RONAK PATEL	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 19-33 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 19-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant's election of claims 1-16 and 19-33 in the reply filed on 10/27/2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 17-18 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected claims, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/27/2009.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

4. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

5. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-9, 12, 15-18, and 20-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 6-12, 14, 16, 18-19 and 21-22 of copending Application No. 10/570776, respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other.

7. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims are not patentably distinct from each other because the subject matter claimed in the instant application is rendered obvious by claims claimed in the conflicting application.

**Table 1**

<b>Application # 10/539784 claims</b>	<b>Application # 10/570776 claims</b>
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<p>Claim 1 (original). An easy-tear, halogen-free winding tape composed of a film layer and of an adhesive layer, the film comprising a copolymer of</p> <p>(a) a-olefin of the formula <math>R-CH=CH_2</math>, where R is hydrogen or an alkyl radical having 1 to 10 carbon atoms, and</p> <p>(b) an a,13-ethylenically unsaturated carboxylic acid of 3 to 8 carbon atoms, and</p> <p>(c) optionally a further monoethylenically unsaturated monomer, 10 to 90% of the hydrogen atoms of the carboxylic acid groups of the copolymer being substituted by metal ions as a result of neutralization.</p> <p><del>Claim 15. The winding tape of at least one of the preceding claims, characterized in that claim 2, wherein the copolymer-containing film layer has been coextruded with a further film layer which comprises a polymer, in particular an ethylene-based polymer, the ethylene-based polymer having a melt index of preferably less than 10 g/10 min, in particular less than 6 g/10 min.</del></p>	<p>1. Claim 1 (currently amended). A halogen-free winding tape composed of an at least two-layer film and, preferably optionally, of an adhesive layer applied thereto, <del>characterized in that</del> <u>wherein</u> the film comprises</p> <p>A) a first layer containing a copolymer of</p> <p>(a) an a-olefin of the formula <math>R-CH=CH_2</math>, where R is hydrogen or an alkyl radical having 1 to 10 carbon atoms, and</p> <p>(b) an a,13-ethylenically unsaturated carboxylic acid of 3 to 8 carbon atoms, and</p> <p>(c) optionally a further monoethylenically unsaturated monomer, 10 to 90% of the carboxylic acid groups of the copolymer being substituted by metal ions as a result of neutralization, and</p> <p>B) at least one further, second layer of an ethylene polymer having a melt index of less than 8 g/10 min at 2.16 kg and 190°C.</p>
<p><del>Claim 3 (currently amended). The winding tape of at least one of the preceding claims, characterized in that claim 1, wherein the fraction of copolymer is 'at least 10% by weight and preferably at least 50% by weight.</del></p>	<p>2. (currently amended). The winding tape of claim 1, <del>characterized in that</del> wherein the fraction of copolymer is at least 10% by weight and <del>preferably at least 50% by weight.</del></p>
<p><del>Claim 13 (currently amended). The winding tape of at least one of the preceding claims, characterized in that claim 1, wherein the film layer has been is produced by calender processing, in which case the melt index of the copolymer is below 5 g/10min, preferably below 1 g/10 min and in particular below 0.7 g/10 min, and/or</del></p>	<p>3. (currently amended). The winding tape of claim 1 er-2-, <del>characterized in that</del> wherein the melt index of the copolymer is below 10 g/10 min, <del>preferably below 1 g/10 min, at 2.16 kg and 190°C.</del></p>

extrusion processing, in which case the melt index of the copolymer is between 0.2 and 10 g/10 min, <del>in particular between 0.5 and 5 g/10 min.</del>	
Claim 2 (currently amended). The winding tape of claim 1, <del>characterized in that</del> wherein the metal ions of the copolymer is are monovalent to trivalent and comes preferably optionally from groups I, II, III, IV-A and VII of the Periodic Table, <del>--mere preferably from the alkali metals of the group, particularly sodium.</del>	4. (Currently amended). The winding tape of <del>at least one of claims 1 to 3,</del> characterized in that claim 1, wherein the metal ions are monovalent to trivalent, <del>preferably from the alkali metals group, particularly sodium.</del>
Claim 4 (currently amended). The winding tape of <del>at least one of the preceding claims,</del> characterized in that claim 1, wherein the film layer <del>has been</del> is produced by blown-film extrusion.	6. (currently amended). The winding tape of <del>at least one of the preceding claims,</del> characterized in that claim 1, wherein the film is produced by blown- film extrusion.
Claim 5 (currently amended). The winding tape of <del>at least one of the preceding claims,</del> characterized in that claim 1, wherein the longitudinal draw ratio (ratio of film winding speed to melt speeding the die) is 2 to 25, <del>preferably from 5 to 10,</del> the frost line is smaller than 160 cm, the longitudinal draw ratio divided by the frost line is greater than 0.1 cm <sup>1</sup> , <del>preferably greater than 0.2 cm<sup>4</sup></del> the blow-up ratio is situated in the range from 1 to 4, <del>preferably from 1.8 to 2.5,</del> and/or the die gap is situated in the range from 1 to 1.6 mm.	7. (currently amended). The winding tape of <del>at Least one of the preceding claims,</del> characterized in that claim 1, wherein <ul style="list-style-type: none"> <li>• the longitudinal draw ratio (ratio of film winding speed to melt speed in the die) is 2 to 25, <del>preferably 5 to 10,</del></li> <li>• the frost line is smaller than 160 cm, • the longitudinal draw ratio divided by the frost line is greater than 0.1 cm<sup>-1</sup>, <del>preferably greater than 0.2 cm<sup>4</sup></del></li> <li>• the blow-up ratio is situated in the range from 1 to 4, <del>preferably from 1.8 to 2.5,</del> and/or</li> <li>• the die gap is situated in the range from 1 to 1.6 mm.</li> </ul>
Claim 6 (currently amended). The winding tape of <del>at least one of the preceding claims,</del> characterized in that claim 1, wherein the tensile strength <u>as determined</u> by the method of Elmendorf in the machine	8. (currently amended). The winding tape of <del>at least one of the preceding claims,</del> characterized in that claim 1, wherein the tensile strength by the method of Elmendorf in the machine direction is at least twice, <del>preferably at least four</del>

direction is at least twice, ~~preferably at least four~~  
the tensile strength in the cross direction.

Claim 7 (currently amended).

The winding tape of at least one of the ~~preceding claims,~~  
~~characterized in that claim 1,~~ wherein  
film layer thickness is from 30 to 180  $\mu\text{m}$ ,  
~~in particular 55 to 100  $\mu\text{m}$ ,~~ force at 1%  
elongation in machine direction is 0.6 to 4  
N/cm, force at 100% elongation is from 5  
to 20 N/cm, breaking elongation is 200 to  
1000%, ~~preferably 30 to 400%,~~ tensile  
strength is 6 to 40, ~~preferably 8 to 15 N/cm~~  
and/or breakdown voltage is at least 5  
kV/100  $\mu\text{m}$ .

Claim 8 (currently amended).

The winding tape of at least one of the ~~preceding claims,~~  
~~characterized in that claim 11~~ wherein  
there is a primer layer between film layer  
and adhesive layer, the amount of the  
adhesive layer is 10 to 40 g/m<sup>2</sup>, ~~preferably~~  
~~18 to 28 g/m<sup>2</sup>—the bond strength to steel~~  
~~is 1.5 to 3 N/cm, the unwind force is 1.2 to~~  
~~6.0 N/cm at an unwind speed of 300~~  
~~mm/min unwind speed, preferably 1.6 to~~  
~~4.0 N/cm, more preferably 1.8 to 2.5 N/cm,~~  
and/or the holding power is more than 150  
min.

Claim 9 (currently amended).

The winding tape of at least one of the ~~preceding claims,~~  
~~characterized in that claim 1,~~ wherein the  
winding film comprises a solvent-free  
pressure-sensitive adhesive which is  
produced by coextrusion, melt coating or  
dispersion coating, ~~preferably a pressure-~~  
~~sensitive dispersion adhesive,~~ this the  
surface of the film to which the adhesive is  
applied being joined to the surface of the

the tensile strength in the cross direction.

9. (currently amended). The winding tape  
of at least one of the ~~preceding~~  
~~claims,~~ ~~characterized in that claim 1,~~  
wherein

- film layer thickness is from 30 to 180  $\mu\text{m}$ ,  
~~in particular 55 to 100  $\mu\text{m}$ ,~~ • force at 1%  
elongation in machine direction is 0.6 to 4  
N/cm, • force at 100% elongation is from 5  
to 20 N/cm,
- breaking elongation is 200 to 1000%,  
~~preferably 30 to 400%,~~ • tensile strength is  
6 to 40, ~~preferably 8 to 15 N/cm~~ and/or •  
breakdown voltage is at least 5 kV/100  
 $\mu\text{m}$ .

10. (currently amended). The winding tape  
of at least one of the ~~preceding claims,~~  
~~characterized in that claim 1,~~ wherein

- there is a primer layer between film layer  
and adhesive layer,
- the amount of the adhesive layer is 10 to  
40 g/m<sup>2</sup>, ~~preferably 18 to 28 g/m<sup>2</sup>—~~
- the bond strength to steel is 1.5 to 3  
N/cm,
- the unwind force is 1.2 to 6.0 N/cm at  
300 mm/min unwind speed, ~~preferably 1.6~~  
to 4.0 N/cm, more preferably 1.8 to 2.5  
N/cm, and/or
- the holding power is more than 150 min.

11. (currently amended). The winding tape  
of at least one of the ~~preceding claims,~~  
~~characterized in that claim 1,~~ wherein the  
winding film comprises a solvent-free  
pressure-sensitive adhesive, ~~preferably~~  
~~polyacrylate-based.~~

carrier film by means of being subjected to flame or corona pretreatment or el-an ~~being provided with~~ adhesion promoter layer which is applied by coextrusion or coating.

Claim 12 (currently amended).

The winding tape of ~~at least one of the preceding claims,~~  
~~characterized in that~~ claim 1, wherein the winding film is plasticizer-free or the plasticizer content is ~~se~~ sufficiently low that the fogging number is above 90%

Claim 16 (currently amended).

The winding tape of ~~at least one of the preceding claims,~~  
~~characterized in that~~ claim 1, wherein at least one layer of the winding tape ~~has been~~ is crosslinked, ~~preferably by ionizing radiation or by modification of a polymer with silane groups.~~

Claim 17 (currently amended). A process for producing a the winding tape of ~~at least one of the preceding claims~~ claim 1, wherein

- the winding film is wound to logs, which then, to increase the unwind force, are conditioned by heat treatment and subsequently slit into rolls, the unwind force of the material thus produced at 300 mm/min being higher ~~preferably by~~ at least 50% than without such a measure, or
- **the winding film, for the purpose of increasing the unwind force, is subjected to a flame or corona treatment or is provided with a polar coextrusion layer and is subsequently processed into rolls, the unwind force of the material thus produced at 300 mm/min being higher preferably by at least 50% than without such a measure,**

12. (currently amended). The winding tape of ~~at least one of the preceding claims,~~ characterized in ~~that~~ claim 1, wherein the winding film is plasticizer-free or the plasticizer content is so sufficiently low ~~that~~ ~~the~~ to produce a fogging number is above 90%.

14. (currently amended). The winding tape of ~~at least one of the preceding claims,~~ characterized in ~~that~~ claim 1, wherein at least one layer of the winding tape ~~has been~~ is crosslinked, ~~preferably by ionizing radiation or modification of a polymer with silane groups.~~

16. (currently amended). A process for producing a the winding tape of ~~at least one of the preceding claims,~~ characterized in ~~that~~ claim 1, wherein the winding film, for the purpose of increasing the unwind force, is subjected to a flame or corona treatment or is provided with a polar coextrusion layer and is subsequently processed into rolls, the unwind force of the material thus produced at 300 mm/min being higher preferably by at least 50% than without such a measure.



or the winding film is slit by a process which leads, as a result of rough slit edges, to easier hand tearability, the breaking elongation of the winding-film rolls thus slit being lower ~~preferably~~ by at least 30% than in the case of slitting with sharp blades,

- the winding film is slit on an automatic slitter with defined knife advancement speed,
- the winding film is wound on a core with an inside diameter of 30 to 40 mm~  
~~preferably of board.~~

Claim 18 (currently amended).  
~~The use of a winding tape of at least one of the preceding claim.~~ A method for bundling, protecting, labeling, insulating or sealing ventilation pipes or wires or cables and for sheathing cable harnesses in vehicles or field coils for picture tubes<sup>1</sup> which comprises bundling, protecting~ labeling~ insulating or sealing said ventilation pipes or wires or cables or sheathing said cable harnesses in vehicles or field coils for picture tubes with the winding tape of claim 1.

Claim 22. The winding tape of claim 3, wherein said fraction is at least 50% by weight.

Claim 20. The winding tape of claim 2, wherein said ions are alkali metals of said groups.

Claim 21. The winding tape of claim 20, wherein said alkali metal is sodium.

18. (currently amended). ~~The use of a~~ winding tape of at least one of the preceding claims A method for bundling, protecting, labeling, insulating or sealing ventilation pipes or wires or cables and for sheathing cable harnesses in vehicles or field coils for picture tubes which comprises bundling, protecting, labeling, insulating or sealing said ventilation pipes or wires or cables and sheathing said cable harnesses with the winding tape of claim 1.

19. The winding tape of claim 2, wherein said fraction of said copolymer is at least 50% by weight.

21. The winding tape of claim 4, wherein said metal ions are selected from the alkali metals group.

22. The winding tape of claim 21, wherein said metal ions are sodium.

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9. Claim 1 of the conflicting Application # 10570776 claims the halogen free winding tape composed of at least a two layer and optionally of an adhesive layer applied thereto where the film comprises a copolymer of alpha-olefin of the formula  $R-CH=CH_2$ , where R is hydrogen or an alkyl radical having 1 to 10 carbons, and an  $\alpha,\beta$ -ethylenically unsaturated carboxylic acid of 3 to 8 and optically a further monoethylenically unsaturated monomer, 10 to 90% of the hydrogen atoms of the carboxylic acid groups of the copolymer being substituted by metal ions as a result of neutralization and at least one further, second layer of an ethylene polymer having a melt index of less than 8g/10min at 2.16 kg and 190°C. This resulting subject matter would define a subgenus of Claim 1 of 10/539784 and hence anticipate Claim 1 of 10/539784, rendering Claim 1 of Serial. No. 10/539,784 unpatentable for obviousness-type double-patenting.

10. Regarding claims 2-9, 12, 15-18 and 20-21 of the instant application, the scope of the claims 2, 4, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 19, 21 and 22 of copending Application No. 10/570,776 is the same as that of claims 2-9, 12, 15-18 and 20-21, respectively, except for the differences already addressed above and so these claims are also unpatentable for obviousness-type double patenting over Serial No. 10/539,784.

### ***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

12. Claims 1, 2, 4-5, 7, 8, 13, 14, 15, 19, 20, 23, 31, 32, are rejected under 35

U.S.C. 102(e) as being anticipated by Tachino et al. (US 2006/0057318).

13. Regarding claims 1, 2, 7, 8, 13, 14, 15, 19, 20, 31, 32 Tachino discloses a multilayer structure constructed of two or more layers including a potassium ionomer layer (X) and a layer (Y) comprising a polymer material like LLDPE (abstract). Layer (X) comprises a potassium ionomer of ethylene unsaturated carboxylic acid copolymer (claim 4). Tachino also discloses mixed ionomers preferably 70% or more neutralization by potassium ion, where the ion is monovalent and belongs to the alkali metal groups, of the ethenically unsaturated carboxylic acid copolymers that has carboxylic acid content of 10 to 20% by weight and an average melt flow rate of 1 to 300 g/10min as determined at a temperature of 190 C and under a load of 2160g (para 0014), Tachino also discloses the ethylene polymer used in the (Y) layer, second layer of the present application has melt index of 0.1 to 100 g/10min at a temperature of 190C and under a load of 2160 g (para 0027), which clearly indicates that the ethylene based polymer melt index is not substantially lower than that of the copolymer containing first layer. Tachino also discloses that the layer X can be blended with another thermoplastic polymer to an extent that the antistatic properties, slip characteristics and scratch resistance are not impaired and such polymers can be ethylene based polymers (para 0017) Tachino also discloses that the multilayer structure can be manufactured by extrusion coating process, co-extrusion process (para 0033) and discloses in table 6 for example 13 where the thickness of the potassium ionomer of ethylene unsaturated carboxylic acid

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copolymer layer is 50 micrometer. Tachino also discloses that the ethylene copolymer manufactured in the presence of metallocene catalyst employed as a polymer material of the surface layer (Y) (para 0025) which have varied density values in accordance with the alpha olefin content of the copolymer and it is preferable to employ one that has a melt flow rate of 0.1 to 100 g/10min as determined at the temperature of 190 C and under the load of 2160g (para 0027). Tachino discloses an embodiment of a three layer structure comprising an outer layer Y, the intermediate layer X, which is the film layer of present application, and the inner layer (Z) (para 0032) also discloses that the multilayer structure can be provided with an adhesive layer on one side or both side of its surface layer (para 0073), which clearly suggests that the adhesive layer can be on side of the inner layer or surface layer, which makes four layer structure as YXZA, A indicates an adhesive layer, X as an first layer and Z as an primer layer which is between film layer and adhesive layer and multilayer structure can be utilized for the present application in addition to the packaging material use such as semiconductor-use adhesive tape (para 0072), as Tachino does not mention the use of halogen in its entire application, the multilayer structure for the adhesive tape would be halogen free. As Tachino discloses a multilayer structure constructed of two or more layers including a potassium ionomer layer (X), Layer (X) comprises a potassium ionomer of ethylene unsaturated carboxylic acid copolymer (claim 4) and also multilayer structure is used in the manufacture of tapes, it therefore would be inherent that the it tape would be easy tear winding tape.

14. Regarding Claims 4-5, 23, Although Tachino does not disclose that the film is produced by blow film extrusion it is noted that "[E]ven though product-by-process

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claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

15. Therefore, absent evidence of criticality regarding the presently claimed process and given that Tachino meets the requirements of the claimed product, Tachino clearly meet the requirements of present claims.

### ***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 29 and 30 are rejected under 35 U.S.C. 103 (a) as being unpatentable by Tachino et al. (US 2006/0057318)

18. Regarding claim 29-30, Tachino discloses mixed ionomers preferably 70% or more neutralization by potassium ion, where the ion is monovalent and belongs to the

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alkali metal groups of the ethenically unsaturated carboxylic acid copolymers that has carboxylic acid content of 10 to 20% by weight and an average melt flow rate of 1 to 300 g/10min as determined at a temperature of 190 C and under a load of 2160g (para 0014), while the present claims require that the melt flow index is below 1 g/10min.

19. It is apparent, however, that the instantly claimed melt flow index and that taught by Tachino are so close to each other that the fact pattern is similar to the one in In re Woodruff , 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a “slight” difference in the ranges the court held that such a difference did not “render the claims patentable” or, alternatively, that “a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties”.

20. In light of the case law cited above and given that there is only a “slight” difference between the Melt flow index disclosed by Tachino and the melt flow index disclosed in the present claims, it therefore would have been obvious to one of ordinary skill in the art that the melt flow index disclosed in the present claims is but an obvious variant of the melt flow index disclosed in Tachino, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

21. Claims 3, 22 and 25 are rejected under 35 U.S.C. 103 (a) as being unpatentable by Tachino et al. (US 2006/0057318) in view of Vogel et al. (US 2002/0055006)

22. Regarding claims 3, 22 and 25 Tachino fails to disclose that the fraction of copolymer is at least 50% by weight. However, Vogel discloses a multilayer, coextruded

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ionomeric thermoplastic sheet and film (para 0003) and discloses that the ionomer composition consists of a copolymer derived from ethylene and alpha olefin unsaturated carboxylic acid wherein the copolymer is neutralized with metal ions and the ionomer is present in the range from 60 to 40 weight percent (para 0031). The monolayer sheets are preferably about 1 to 50 mils thick (para 0088), 1 mils = 25.4 micrometer, which meets the claim limitation of claim 25 and also discloses an ionomer monolayer which can be clear or pigmented (para 0091). The motivation of using the resin composition in a fraction of 60 to 40 % by weight and film layer thickness in the range of 1 to 50 mils thickness is to have composition to enhanced mar resistance and have clear and low haze levels and outstanding melt strength (para 0139 and 0140)

23. In light of the motivation of using the resin composition of ionomer with ethylene unsaturated carboxylic acid in 40-60 % by weight and in the thickness of range 1 to 50 mils as taught by Vogel as described above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to use the resin composition in 50 wt% as taught by Vogel in the film layer of Tachino motivated by the desire to form a composition to enhanced mar resistance and have clear and low haze levels and outstanding melt strength (para 0139 and 0140)

24. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tachino et al. (US 2006/0057318) in view of Riedel (US 5679190).

25. Regarding claim 6, Tachino fails to mention that the tensile strength by the method of Elmendorf in the machine direction is at least twice the tensile strength in the cross direction. However, Riedel mentions the pressure sensitive adhesive tape having

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the tensile strength in the machine direction is at least twice the tensile strength in the cross direction (Table 2; col 15, line 28). Riedel mentions the ratio of the tensile strength in the MD:CD is more than two in the PSA tape would have good tearable characteristics (Table 2).

26. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the multilayer structure for adhesive tape of Tachino to prepare the multilayer winding film that is hand tearable by having a ratio of tensile strength in the machine direction to be at least twice the tensile strength in the cross direction of Riedel by using the process conditions known in the art motivated by the desire to improve the tear properties of the film.

27. Claims 10-11 are rejected under 35 U.S.C. 103 (a) as being unpatentable by Tachino et al. (US 2006/0057318) in view of Mientus (WO 99/64239).

28. Regarding claim 10, Tachino fails to disclose the multilayer film comprises the pressure sensitive adhesive which is polyacrylates based. However, Mientus teaches the pressure -sensitive adhesive can be any including rubber based adhesive, acrylic adhesive, vinyl ether adhesive and silicone adhesives (page 23, line 35, page 24, line 1).

29. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the multilayer structure of Tachino with the pressure sensitive adhesive that is polyacrylates of Mientus motivated by the desire to have excellent adhesive properties that would adhere the adhesive layer to the film layer.



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30. Regarding claim 11, Tachino fails to disclose that the multilayer film of the winding tape is black. However, Mientus discloses that the multilayer film can be pigmented with different colors such as white, black, yellow, blue and red (page 41, lines 15-20). The motivation for pigmenting the adhesive tape with different colors such as black is to provide desired color to the tape.

31. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the multilayer structure of Tachino with the pigmented colors of Mientus in the multilayer film motivated by the desire to provide desired color to the tape.

32. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tachino et al. (US 2006/0057318) in view of Mamish et al. (US 6355344)

33. Regarding claim 12, Tachino fails to disclose that the winding film is plasticizer-free or the plasticizer content is sufficiently low to produce a fogging number above 90%. However, Mamish discloses pressure sensitive adhesive film material has a plastic film and a PSA layer (abstract) and discloses that the additives used in the plastic film contributes no halogenated polymers and no plasticizers to the plastic film (col. 6, lines 32-40). The motivation for adding the additives that has no halogenated polymers and no plasticizers to the film is for recyclability and low-fogging (col. 6, lines 32-40).

34. In light of the motivation of having the PSA adhesive film to be plasticizer-free and non halogenated as taught by Mamish above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to not make the multilayer

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structure used to make adhesive tape of Tachino to be plasticizer free as taught by Mamish to form the multilayer adhesive tape to have low-fogging.

35. Claims 16 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tachino et al. (US 2006/0057318) in view of Tanaka (EP 333294)

36. Regarding claim 16 and 33, Tachino fails to disclose that the layer of the winding tape is crosslinked by ionizing radiation. However, Tanaka discloses multilayered crosslinked ethylenic resin films comprising a laminate of at least two ethylenic layers crosslinked by irradiation with ionizing radiation (abstract). The motivation for crosslinking the layer with ionizing radiation is to improve the tear strength of the resin film (page 3, lines 6-9)

37. In light of the motivation of crosslinking the film by ionizing radiation as taught by Tanaka above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to crosslink the layer of Tachino by ionizing radiation as taught by Tanaka to form an adhesive tape with improved tear strength.

38. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tachino et al. (US 2006/0057318) in view of Chen (US 2007/0207332)

39. Regarding claim 21, Tachino fails to disclose that the metal ions are selected from the alkali metal group such as sodium, However, Chen discloses an organic salt modified potassium ionomeric copolymers (abstract) and ionomeric resins are ionic copolymers of an olefin such as ethylene with a metal salt of an unsaturated carboxylic acid, and one alkali metal such as sodium, potassium, magnesium or combination of such cations is used to neutralize some portion of the acidic group in the copolymer

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(para 0013) and also discloses carboxylic acid can be neutralized by mixed ions such as potassium and sodium (para 0029). The motivation for using the alkali metals such as sodium to neutralize ethylenically unsaturated carboxylic acid copolymer is to produce films that have excellent gas absorption and transmission and antifouling properties (abstract).

40. In light of the motivation of using the alkali metal such as sodium to neutralize the copolymer as taught by Chen as disclosed above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to neutralize the copolymer with sodium as taught by Chen in multilayer structure of Tachino to produce multilayer film for adhesive that have excellent gas absorption and transmission and antifouling properties.

41. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tachino et al. (US 2006/0057318) in view of Sumida (US 5405565).

42. Regarding claim 24, Tachino fails to mention that the tensile strength by the method of Elmendorf in the machine direction is at least four times the tensile strength in the cross direction. However, Sumida mentions the multilayer film having the tensile strength in the machine direction is at least four times the tensile strength in the cross direction (col 21, lines 60-68). Sumida teaches the multilayer film with the tensile strength in the machine direction at least four times the tensile strength in the cross direction would improve the strength of the film and would make it less susceptible to tear (col 22, lines 22-26).

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43. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the winding tape of the multilayer film with an adhesive layer of Tachino to prepare the multilayer film that is hand tearable by having a ratio of tensile strength in the machine direction to be at least four times the tensile strength in the cross direction of Sumida by using the process conditions and test methods known in the art motivated by the desire to improve the tear properties and strength of the film and make the film less susceptible to tear

44. Claims 9 and 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tachino et al. (US 2006/0057318) in view of Varela de la Rosa et al. (US 6927267)

45. Regarding claims 9 and 28, Tachino fails to disclose that the adhesive is pressure sensitive dispersion adhesive. However, Rosa discloses a pressure sensitive adhesive (PSA) (abstract) and also discloses an aqueous dispersion comprising the PSA polymer (claim 31). PSA can be solvent-free natural or synthetic resin having a viscoelasticity termed tack (col. 1, lines 14-16). The motivation for using solvent-free pressure sensitive dispersion adhesive in tape application is to exhibit improved cohesion coupled with essentially unchanged adhesion and tackiness (col. 12, lines 4-6) and also they can stick to variety of substrates and makes it simple to use and make it possible to work rapidly when bonding (col. 1, lines 20-28)

46. In light of the motivation of using the pressure sensitive dispersion adhesive in the tape application as taught by Varela de la Rosa as taught above, it therefore would have been obvious to one of ordinary skill in the art at the time of invention to use solvent free pressure sensitive dispersion adhesive in the adhesive layer of Tachino to

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exhibit improved cohesion coupled with essentially unchanged adhesion and tackiness (col. 12, lines 4-6) and also they can stick to variety of substrates and makes it simple to use and make it possible to work rapidly when bonding (col. 1, lines 20-28).

47. As to claim 26 and 27, which depends on claim 8, since the feature, "amount of an adhesive layer is 18 to 28 g/m<sup>2</sup> and the unwind force at an unwind speed of 300 mm/min is 1.6 to 4.0 N/cm or the holding power is more than 150 min." set forth in claim 1 and further limited by claim 26 and 27, is optional. Since this feature may be absent, the claimed limitation is taught when the feature is absent. The limitation where there is a primer layer between film layer and adhesive layer has already been addressed above in claim 8.

### ***Response to Arguments***

48. Applicants' filing of a proper terminal disclaimer on 10/27/2009 overcomes the double patenting rejection of record.

49 Applicant's arguments with respect to claims 1-16 and 19-33 have been considered but are moot in view of the new ground(s) of rejection.

50. Applicants filed a terminal disclaimer which was disapproved and it was improper because the words "legal title" in the clause do not include common ownership as to equitable title required to be included by 37 CFR 1.321(c)(3).

(Note: 37 CFR 1.321(c)(3) requires that a TD "Include a provision that any patent granted on that application or any patent subject to the reexamination proceeding shall be enforceable only for and during such period that said patent is commonly owned with

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the application or patent which formed the basis for the judicially created double patenting.")

### **CONCLUSION**

51. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONA K PATEL whose telephone number is (571)270-1142. The examiner can normally be reached on Monday to Thursday 8 AM EST to 6PM EST.

52. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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53. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. P./

Ronak C Patel

Patent Examiner, Art Unit 1794

01/16/2010

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794